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THE CHARACTERISTICS OF STUDENTS IN THE ALBERTA INSTITUTES OF TECHNOLOGY

by

DONALD JOSEPH JOHN SCHINDELKA

Provincial Board of Post Secondary Education
Department of Education
Edmonton, Alberta

December, 1968

cc Colleges Commission

69

THE UNIVERSITY OF ALBERTA

THE CHARACTERISTICS OF STUDENTS IN THE ALBERTA INSTITUTES OF TECHNOLOGY

BY

DONALD JOSEPH JOHN SCHINDELKA

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OF MASTER OF EDUCATION

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ABSTRACT

The main purpose of this study was to examine the characteristics of full-time day students attending the Institutes of Technology in Alberta. When the data were examined, it was found that the largest portion of the respondents at each of the Institutes of Technology was enrolled in the Technology Division. Most of the students that were surveyed lived in Alberta. In both institutes the majority of the students were male, and the student population at each was made up largely of individuals in the age range from eighteen to twenty-five years. Most of the respondents had completed grade twelve and most of the diplomates that were surveyed had taken a matriculation program in high school. More than one-half of the students surveyed at each of the institutes had attended a high school having 400 or more students. Many of the students possessed university entrance standing. The majority of the respondents were single, and were living at home. Many of the non-diplomates had more than ninety-five high school credits, and most of the students were enrolled in a two-year program. Almost two-thirds of the students were in the first year of their programs. More than three-quarters of the respondents were not employed at the time the survey was conducted. There was wide variation in the estimated cost of the year's attendance at the institutes and no clear trend seemed to emerge.

ACKNOWLEDGEMENTS

The writer gratefully acknowledges the assistance he has received from the members of his thesis supervisory committee. A particular indebtedness is owed to Dr. F. Enns for his guidance throughout the development of the study. Appreciation is also expressed to Dr. G. L. Mowat, Chairman of the Board of Post-Secondary Education, for his valuable assistance, and also to Dr. H. Kolesar for his help in conducting the survey. In addition, thanks are extended to the principals and staffs of the Institutes of Technology in Alberta and to the many students who completed inventories.

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CHAPTER I

INTRODUCTION, METHOD OF STUDY AND COLLECTION OF DATA

I. INTRODUCTORY STATEMENT

There is in Alberta at the present time a definite trend to increased numbers of students completing grade twelve. The 1967 Annual Report of the Alberta Department of Education shows that in the years 1965, 1966 and 1967, the number of grade twelve graduates was 15,898, 19,927 and 22,107 respectively.[1] It is unlikely that this increase in the number of graduates from the high schools is due to any one factor, but it is very possibly accounted for by such factors as increased population, higher retention rates in schools, recognition of the value of further education, changes in requirements for diplomas and matriculation, and demands from the business community for more highly educated individuals. As a result, there is a need for different types of facilities so that these graduates can further equip themselves to become knowledgeable and productive members of our society. This concept was suggested by Medsker when he stated that, "Without doubt one of the forces is the growing belief that educational opportunities beyond high school must be equalized."[2]

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[1] Province of Alberta, Annual Report of the Department of Education (Edmonton: Queen's Printer, 1968), p. 73.

[2] L. L. Medsker, The Junior College: Progress and Prospect (Toronto: McGraw-Hill Book Company, Inc., 1960), p. 17.

At the present time there are several types of educational institutions which are trying to cope with the increased numbers of high school graduates who wish to further their educational training. According to a study conducted by Stewart in 1965:

> The primary purpose of post-secondary institutions must be to extend post-school educational opportunities to young people who, having completed the programs of the school, do not, either by choice or by failure to meet the required conditions, go on to university. The purpose is to provide a valid alternative to university education for these young people. The institutions may provide a 'second chance' for students not initially qualified to enter university studies. The new institutions may also provide programs which will advance the education of students who will proceed to university.[3]

Among the post-secondary institutions in Alberta are found the Universities (three), Public Junior Colleges (five), Private Junior Colleges (one), Institutes of Technology (two) and Agricultural and Vocational Colleges (three). However, it is difficult to determine the extent to which these various institutions are providing the necessary educational opportunities for high school graduates. It is also difficult to determine accurately just which students are taking advantage of these opportunities.

The 1959 Report of the Royal Commission on Education in Alberta[4] recommended a decentralization of vocational and trade programs and their re-establishment in community colleges. It also recommended that a

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[3] Andrew Stewart, Special Study on Junior Colleges (Edmonton: Queen's Printer, 1966), p. 15.

[4] Report of the Royal Commission on Education in Alberta (Edmonton: Queen's Printer, 1959), pp. 154, 159.

committee be established to create a master plan of regions in which these colleges could be established.

Recently a Board of Post-Secondary Education has been established in Alberta to coordinate the activities of the various post-secondary educational institutions in the province. If this board is to fulfill its purpose, various types of information will be needed in order for it to make decisions compatible with the post-secondary needs of Alberta youth.

It has been suggested by Medsker[5] that there is need for democratization of educational opportunity which would make it possible for students to enter some type of institution when their high school academic backgrounds might not permit their entrance into university because they were unable to meet admission standards. Furthermore, according to Stewart[6] the general problem is to make the necessary modifications or additions to the total educational system in order to provide for the varied needs of post-secondary students.

A recent study by Farquhar[7] of Junior Colleges in Alberta has shown that approximately 63 per cent of the 1965-66 grade twelve enrollment did not continue full-time formal education during the following year. However, there are no readily available statistics to show what

---

[5] Medsker, op. cit., p. 21.

[6] Stewart, op. cit., p. 11.

[7] Hugh E. Farquhar, "The Role of the College in the System of Higher Education in Alberta" (Unpublished Doctoral thesis, University of Alberta, Edmonton, 1967), p. 141.

happened to these students. This study included only students registered in grade twelve in Alberta high schools, but did not account for those who left school in grade eleven, ten or earlier. Some of the educational institutions mentioned previously do accept students without a high school diploma, but it is not known what happens to a very large number of students in the high school age bracket of approximately fifteen to twenty years.

The specific purpose of this study was to attempt to gather necessary information about the characteristics of students who were attending the two Institutes of Technology in Alberta. There is at present some statistical information about students, but no comprehensive description of the actual characteristics of the students attending the Institutes of Technology. As stated earlier, it is necessary to have a detailed description of the students attending the Institutes of Technology in order to determine if the present facilities and programs are serving post-secondary educational needs.

II. STATEMENT OF THE PROBLEM

This study sought to examine selected characteristics of full-time day students attending the Institutes of Technology in Alberta. Students were grouped according to the institution attended and the institutional division in which they were enrolled. They were then examined in terms of the following:

1. Distance of permanent residence from the city in which the institute was located.

2. Sex.
3. Age.
4. Last school grade completed.
5. Size of last high school attended.
6. Type of high school program taken by diplomates.
7. High school academic qualifications.

The students were grouped according to institution attended and sex and further analyses were made in terms of the following:

1. Present place of residence.
2. Age.
3. Marital status.
4. Estimate of the total cost of the year's attendance at the institute.
5. High school credits possessed by non-diplomates.
6. Length of institutional program.
7. Year of program in which the student was registered.

The students were then grouped according to institution attended and age and further analyses were made in terms of:

1. Employment status.
2. Last school grade completed.

III. IMPORTANCE OF THE STUDY

Fields claims that "...all those who have the desire and who have the ability to profit by attending, and for whom the community

college can provide appropriate programs of study..." should attend.[8] This principle could possibly be applied in Alberta so that post-secondary educational services would be made available to anyone who has the ability to profit by attendance.

This study sought to ascertain the types of students that were taking advantage of the existing opportunities in April, 1968. By examining the characteristics of the students who were attending the Institutes of Technology, and by searching for segments of the population which were not represented among the students surveyed, it might be possible to discover the types of students whose post-secondary educational needs were not being satisfied by the Institutes of Technology. Information obtained on the distance students had come to attend the institution could be of value in determining whether more post-secondary institutions were needed and where they should be located if they were needed. Furthermore, examination of data concerning the educational backgrounds, ages, and types of programs being taken by the students attending the Institutes of Technology could be of value in helping to determine the need for new and diversified courses and more flexible entrance requirements in the Institutes of Technology. The information collected might also be useful in determining whether or not facilities and course offerings at the institutes were being provided equitably for male and female students.

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[8] Ralph R. Fields, The Community College Movement (New York: McGraw-Hill Book Company Inc., 1962), p. 277.

IV. DEFINITIONS OF TERMS USED

Board of Post-Secondary Education. A board, composed of members appointed by the Minister of Education to advise him on all matters related to the work of the Institutes of Technology and to make recommendations on provincial needs in the post-secondary field.

Diplomate. A student who obtained full grade twelve graduation standing in Alberta High Schools with certain credit requirements in the Alberta school system.

Full-Time Day Students. For the purpose of this study full-time day students were regarded as those students who attended either the Northern Alberta Institute of Technology or the Southern Alberta Institute of Technology taking classes during the day on a full-time basis as defined by the institution which they attended.

Institutes of Technology. In this study the Institutes of Technology referred to were the Southern Alberta Institute of Technology in Calgary, and the Northern Alberta Institute of Technology in Edmonton.

Matriculant. A diplomate in the Alberta school system who successfully completed the grade twelve program and satisfied the additional requirements for entry into the provincial universities.

V. DELIMITATIONS OF THE STUDY

This study was limited to a survey of the full-time day students (other than those enrolled in the apprenticeship program) in the

two Institutes of Technology in Alberta. Both institutes provided an extensive program of Evening Courses as well as several short courses which provided educational opportunities for many students who were not included in this survey. Students who were enrolled in the Apprenticeship Program leading to Journeyman status in a number of designated trades were not surveyed. A further delimitation was that only selected student characteristics were examined.

VI. THE INVENTORY

Construction of the Inventory. The inventory which appears in the Appendix was the instrument used in the collection of the data. Since no suitable instrument was found for the purpose of this study it was necessary that an instrument be constructed.

Format. Factors considered in planning the format were that the inventory should be simple to complete and that data should be easily transferable to IBM data cards for computer processing. The type of question format that was used involved multiple choice items. The inventory was divided into three sections. The first section dealt with the personal characteristics of the students. The second section was concerned with gathering information about the post-secondary educational characteristics of the students, and the third section of the inventory dealt with the future plans of the students.

Sources of Inventory Items. Items used in the inventory were formulated on the basis of information deemed important to the field of

post-secondary education and included questions or modifications of questions found in similar studies. In addition, items were included in the inventory as requested by officials from the institutions in which the inventory was to be administered, in order to provide them with specific information to meet their own needs.

Revision of the Inventory. When the inventory approached what appeared to be a final form it was submitted to officials from the office of the Board of Post-Secondary Education, and the two Institutes of Technology in Alberta for suggestions and revisions. Since the inventory was also administered to the full-time day students at the three Agricultural and Vocational Colleges and the five Public Junior Colleges in Alberta, officials from these institutions were also asked to make suggestions, additions and revisions. After these officials had examined the inventory and had made suggestions for its improvement, revisions were made in order to give clarity and validity to the questions in the inventory.

Method of Administering the Inventory. Contacts were made with the principals of the two Institutes of Technology in Alberta through the office of the Board of Post-Secondary Education, seeking permission to conduct the study within their institutions. Officials from each institute were also asked to report the number of full-time students enrolled in day classes, so that these totals could be compared with the number of inventories that were returned. The confidential nature of the study was emphasized, as no personal identification of any kind was called

for on the inventories. During March and the early part of April the inventories were sent to the institutions. In addition, each institution received a separate envelope containing a sample of the documents that were sent to the institution. A set of directions for the administration of the inventory was sent to each official administering the inventory. A copy of this sheet is included with the inventory on page 87 in the Appendix of this study. Answer sheets were also included with the inventories, and a sample answer sheet is included on page 102 in the Appendix.

Returns. A final count showed that out of a possible 1,476 eligible students attending the Southern Alberta Institute of Technology 1,085 completed and returned inventories. The Northern Alberta Institute of Technology returned 1,630 completed inventories, out of a possible 2,511. This gave a 73.5 per cent return for the Southern Alberta Institute of Technology and a 64.9 per cent return for the Northern Alberta Institute of Technology.

VII. TREATMENT OF THE DATA

Data collected on the answer sheets were transferred to IBM data cards for computer processing.

Computer Program. A cross-tabulation computer program was used to tabulate selected characteristics in terms of institute, institutional division, sex, and age. The answers given by the respondents for each inventory item were compiled in terms of the number of respondents making

each choice. The total number of choices in each category of each item was then transformed into a percentage of the total number of respondents. The total number of responses differed for each inventory item because not all respondents completed every item, and because the computer program eliminated all invalid or spoiled answers.

CHAPTER II

RELATED STUDIES

nada there appears to be a need for studies of this kind
studies that have been conducted in the field of post-
lucation deal with junior colleges. Several studies of
ge students have been carried out in the United States.
for the Study of Higher Education in Berkeley, California has
several investigations of junior college students as reported
.[9] In his book, The Junior College: Progress and Prospect,
orted various types of descriptive data about the junior
dent.[10] Included were such characteristics as academic
ocio-economic background, age range, educational background,
tus and sex.

calf[11] reported another study which dealt with community
dent characteristics in the State of Washington. This
a description of full-time students in terms of sex, age,
program, place of residence, distance from the college, high
ndance and future plans.

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isker, op. cit., Chapter 2.

[illegible]

an W. Metcalf, Community College Student Characteristics
under the supervision of the State Office of Public
Olympia, Washington, Research Report 01-05, April, 1965).

A study conducted by Loken[12] in 1966 and another by Farquhar[13] in 1967 provided some information about students attending Alberta's Junior Colleges. These studies obtained information on enrollments and the geographical distribution of the homes of the students attending the colleges, however, no attempt was made to give a comprehensive picture of junior college students.

A recent monograph prepared in 1967 by Fisher[14] included a section which gave a comprehensive review of the literature that described students who had attended Junior Colleges in the United States. He reviewed such characteristics as student age, ability, sex, marital status and socio-economic status. There were several conclusions that he felt were justified; the following were among them:

> Considering total full-time enrollments at the junior colleges, the ratio of male to female is about three to one.
>
> About one-fifth of the full-time students at junior colleges are married.
>
> About 70 per cent of the full-time junior college students hold full or part-time jobs while attending college.[15]

Some information describing students who have attended the Institutes of Technology can be found, but there appears to be no comprehensive description of students readily available. For instance,

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[12] Gulbrand Loken, "An Analysis of the Junior College in Alberta: Progress, Program, and Prospect" (Unpublished Master's thesis, University of Alberta, Edmonton, 1965).

[13] Farquhar, op. cit.

[14] Grant L. Fisher, The Community College (The Department of Educational Administration, University of Calgary, June, 1967).

[15] Ibid., p. 40.

the Forty-Eighth Annual Calendar[16] of the Southern Alberta Institute of Technology stated that three-quarters of the students enrolled in full-time day courses were from Alberta and one-quarter were from other provinces. The Northern Alberta Institute of Technology has a policy[17] that states that all prospective students must be sixteen years of age or over.

The Report of the Fact-Finding Committee on Post-Secondary and Continuing Education in Alberta reported[18] the number of students attending the Institutes of Technology with and without high school diplomas. The report stated[19] that during the 1964-65 academic term there were 945 full-time students with high school diplomas at the Northern Alberta Institute of Technology compared to 1,177 full-time students without high school diplomas. During the same year the Southern Alberta Institute of Technology had 898 full-time students who had high school diplomas, and 1,235 full-time students who did not.

According to the Report of the Fact-Finding Committee on Post-Secondary and Continuing Education in Alberta[20] the Northern Alberta

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[16] Forty-Eighth Annual Calendar (Calgary: Southern Alberta Institute of Technology, 1967-1968), p. 8.

[17] Calendar 1967-68 (Edmonton: Northern Alberta Institute of Technology, 1967-68), p. 37.

[18] Report of the Fact-Finding Committee on Post-Secondary and Continuing Education in Alberta (Edmonton: University of Alberta, 1966).

[19] *Ibid.*, p. 23.

[20] *Ibid.*

Institute of Technology was concerned about the small number of students entering it from the high school vocational program. In 1966-67, thirty-six students were admitted to the "B" year at the Northern Alberta Institute of Technology and thirty-eight students were admitted to the "B" year at the Southern Alberta Institute of Technology after having completed "A" year by a systematic program at high school.[21] Although the Northern Alberta Institute of Technology was concerned about the small numbers entering from the high school vocational program it was prepared to give the present policy a five-year trial before considering any change.

As a result of the examination of related studies on student characteristics, it appeared that the characteristics selected for this study were very similar to those examined in other areas of the post-secondary education field. Furthermore, a description of the students in the junior colleges provided some information with which to compare the data that described students attending Alberta's two Institutes of Technology.

As this study is discussed in the following chapters, comparisons will be made in order to ascertain how the students surveyed at the Institutes of Technology compared with the students that were examined in the related studies discussed in this chapter. The description of the students attending the Institutes of Technology seemed to be a necessary preliminary step to making further decisions about programs and facilities in the area of post-secondary education in Alberta.

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[21] Ibid., p. 23.

CHAPTER III

ANALYSIS OF DATA IN TERMS OF INSTITUTION AND INSTITUTIONAL DIVISION

Introduction

The data describing the distribution of students in the two Institutes of Technology in terms of the institutional division and selected characteristics of the students are shown in Tables I to XIV. These tables are arranged in pairs with each pair showing the distribution of students in the two Institutes of Technology according to the institutional division and one of the selected characteristics examined. This chapter includes a general examination of the distribution of the students according to institutional division and then describes the distribution according to each of the selected characteristics. The seven student characteristics being examined in terms of institutional division are:

1. Distance of permanent residence from the city in which the institute was located (Tables I and II).
2. Sex (Tables III and IV).
3. Age (Tables V and VI).
4. Last school grade completed (Tables VII and VIII).
5. Size of last high school attended (Tables IX and X).
6. Type of high school program taken by diplomates (Tables XI and XII).
7. High school academic qualifications (Tables XIII and XIV).

Distribution by Division

The institutional divisions provided by the two institutes differed considerably. Table I shows that 71.2 per cent or 748 of the respondents attending the Southern Alberta Institute of Technology were enrolled in the Technology Division. The Applied Arts Division had the next highest enrollment with 202 or 19.2 per cent of the students who completed inventories taking classes in that division.

Table II shows that 1,142 or 73.4 per cent of the students that were surveyed at the Northern Alberta Institute of Technology were enrolled in the Technology Division and 20.8 per cent or 323 of the students were enrolled in the Business Education and Vocational Division, which had the second highest enrollment among the divisions at the Northern Alberta Institute of Technology.

Although the institutional divisions provided by the two Institutes of Technology differed considerably the data indicated that the largest portion of the students was enrolled in the technology division at each of the institutes. This information has implications for the Institutes of Technology in relation to the programs that they provide. Should the two institutes specialize in separate areas and thus offer a broader range of programs to Alberta residents by avoiding duplication, or should they, by duplication, provide opportunities for students from one institute to transfer to the other institute without interrupting their programs? Duplication of the same programs at both institutes would tend to equalize the educational opportunities available to students in southern Alberta

TABLE I

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO DISTANCE FROM PERMANENT RESIDENCE, AND INSTITUTIONAL DIVISION

Institutional Division	Distance of Permanent Residence From City in Which Institute is Located						
	Within This City	1 to 25 miles	26 to 100 miles but in Alberta	Over 100 miles but in Alberta	Outside Alberta	Total	Percentage
Technology	285	18	73	178	194	748	71.2
Cultural	2	0	1	1	1	5	0.5
Applied Arts	104	4	22	34	38	202	19.2
Trade	27	1	11	15	10	64	6.1
Extension or Other	15	0	3	7	7	32	3.0
Total	433	23	110	235	250	1051	
Percentage	41.2	2.2	10.5	22.4	23.8		100.0

TABLE II

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO DISTANCE FROM PERMANENT RESIDENCE, AND INSTITUTIONAL DIVISION

Institutional Division	Distance of Permanent Residence From City in Which Institute is Located						
	Within This City	1 to 25 miles	26 to 100 miles but in Alberta	Over 100 miles but in Alberta	Outside Alberta	Total	Percentage
Technology	520	103	174	271	74	1142	73.4
Business Education and Vocational	159	25	56	56	27	323	20.8
Industrial	24	8	12	15	5	64	4.1
Other	5	1	6	10	4	26	1.7
Total	708	137	248	352	110	1555	
Percentage	45.5	8.8	15.9	22.6	7.1		100.0

and northern Alberta.

Distance of Permanent Residence

A large percentage, above 40 per cent of the respondents at both Institutes of Technology, stated that their permanent residences were within the city where they attended classes. Table I shows that 433 (41.2%) of the students surveyed at the Southern Alberta Institute of Technology said that their permanent residences were located within the city of Calgary. Two hundred thirty-five (22.4%) of the students stated that their permanent residences were located more than 100 miles away from Calgary, but within Alberta and 250 or 23.8 per cent of the students reported that their permanent residences were outside of Alberta.

Table II shows that 708 (45.5%) of the students surveyed at the Northern Alberta Institute of Technology reported that their permanent residences were located within the city of Edmonton, while 352 (22.6%) said that their permanent residences were more than 100 miles from Edmonton, but within Alberta. It is interesting to note that only 7.1 per cent of the respondents attending the Northern Alberta Institute of Technology reported that their permanent residences were outside of Alberta.

This information is important when the equalization of educational opportunity is considered. Are there students who might benefit from attending classes at an Institute of Technology who find it impossible to do so because they live too far away? When there is an

institute located within the city, local students tend to make use of the facilities that it has to offer. It is possible that some of the services offered by the two institutes might be provided at additional locations throughout the province where local populations and needs justify the added expense of decentralizing these facilities. It is possible that other types of post-secondary educational institutions, such as Agricultural and Vocational Colleges, or Junior Colleges might be able to economically offer some of the courses that are now offered only at the Institutes of Technology. However, the high cost of providing many of the technical courses would make it impractical to provide extensive services at additional points and many students will still find it necessary to travel long distances to attend the Institutes of Technology. If these students do not have the desired educational facilities close to their homes perhaps the expenses incurred because of the long distances that they have to travel might be offset in part by some form of grant system that would tend to equalize expenses more justly.

Approximately 24 per cent of the respondents at the Southern Alberta Institute of Technology and 7 per cent of the students at the Northern Alberta Institute of Technology reported that their permanent residences were not in Alberta. This information has implications in the area of financing. With a significant proportion of the students coming from outside of Alberta it is doubtful if the province should be expected to provide them with educational facilities without financial assistance from other governments. There might be some value in

developing a formula which would require individual governments, both federal and provincial, to contribute to the operation of each Institute of Technology in proportion to the benefit derived from the institute by students falling under their jurisdiction.

Sex of the Students

Males outnumbered females at both Institutes of Technology. Table III shows that 928 or 87.2 per cent of the respondents attending the Southern Alberta Institute of Technology were male and 136 or 12.8 per cent were female. Table IV shows the distribution of students attending the Northern Alberta Institute of Technology according to sex. Twelve hundred thirty-one or 79.4 per cent of the respondents were male and 320 or 20.6 per cent were female.

Males outnumbered females at both Institutes of Technology. The ratio of males to females was approximately nine to one at the Southern Alberta Institute of Technology and approximately four to one at the Northern Alberta Institute of Technology. These ratios were larger than those reported by Fisher. He reported that the ratio of males to females in junior colleges in the United States was about three to one.[22]

It is possible that the programs offered in the institutes are more attractive to males than to females. If this is so, perhaps programs should be developed that would attract more females to the

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[22] Fisher, *op. cit.*, p. 40.

TABLE III

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO SEX AND INSTITUTIONAL DIVISION

Institutional Division	Sex		
	Male	Female	Total
Technology	700	57	757
Cultural	4	1	5
Applied Arts	150	56	206
Trade	53	11	64
Extension or Other	21	11	32
Total	928	136	1064
Percentage	87.2	12.8	100.0

TABLE IV

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO SEX AND INSTITUTIONAL DIVISION

Institutional Division	Sex		
	Male	Female	Total
Technology	952	186	1138
Business Education and Vocational	202	123	325
Industrial	59	3	62
Other	18	8	26
Total	1231	320	1551
Percentage	79.4	20.6	100.0

Institutes of Technology. Studies might be conducted to determine what happens to females who desire additional training beyond high school. It is possible that many females who desire post-secondary training attend privately owned institutions such as business colleges, secretarial schools, or schools of hairstyling. If this were found to be true, steps could be taken to equalize post-secondary educational opportunities offered by public agencies for males and females. Some of the public institutions that are now providing programs in the field of post-secondary education might make a concerted effort to provide courses that would serve the needs of females who must presently attend privately owned agencies in order to satisfy their educational needs. There were 123 females compared to 202 males enrolled in the Business Education and Vocational Division at the Northern Alberta Institute of Technology. This program attracted a higher percentage of females than any other program examined, and it is probably one of the reasons why 20.6 per cent of the respondents at the Northern Alberta Institute of Technology were female compared to only 12.8 per cent at the Southern Alberta Institute of Technology which had no program similar to the Business Education and Vocational Program offered at the Northern Alberta Institute of Technology. The small percentage of females attending the Institutes of Technology might also be due in part to the fact that other public institutions, such as schools of nursing, attract large numbers of females who are seeking post-secondary educational training.

Age of the Students

Examination of the data presented in Tables V and VI indicates that there were similarities in the distributions of the students in the two institutes when they were examined in terms of age. At the Southern Alberta Institute of Technology the ages of 969 (91.3%) of the respondents ranged from eighteen to twenty-five years. Five hundred fifty-five of the students in this age range were twenty years of age or younger while 414 were over twenty years of age. At the Northern Alberta Institute of Technology the ages of 1,397 (89.3%) of the respondents ranged from eighteen to twenty-five years. Eight hundred seventy-six of the students in this age range were twenty years of age or younger while 521 were over twenty years of age.

It seems that at the present time the Institutes of Technology are mainly involved in providing young students with additional training before they enter the labour force. There appear to be few older students taking advantage of the full-time day program. It is possible that older students often attend night classes rather than day classes. The Institutes of Technology have a role to play in educating and retraining older students who have already entered the labour force, but whose skills have become out-dated through automation, or other technological changes. It seems that at present many of these potential students do not take advantage of the facilities offered by the Institutes of Technology at least not as full-time day students. Procedures might be explored which would encourage such potential students to attend classes and to up-grade their skills.

TABLE V

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO AGE AND INSTITUTIONAL DIVISION

Institutional Division	Age					
	17 or Under	18 to 20	21 to 25	26 to 30	Over 30	Total
Technology	16	385	304	37	11	753
Cultural	0	3	1	0	1	5
Applied Arts	3	115	73	14	2	207
Trade	1	33	24	4	2	64
Extension or Other	1	19	12	0	0	32
Total	21	555	414	55	16	1061
Percentage	2.0	52.3	39.0	5.2	1.5	100.0

TABLE VI

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO AGE AND INSTITUTIONAL DIVISION

Institutional Division	Age					
	17 or Under	18 to 20	21 to 25	26 to 30	Over 30	Total
Technology	33	620	402	60	32	1147
Business Education and Vocational	11	211	90	6	8	326
Industrial	2	30	21	5	6	64
Other	0	15	8	2	2	27
Total	46	876	521	73	48	1564
Percentage	2.9	56.0	33.3	4.7	3.1	100.0

Last School Grade Completed

Tables VII and VIII show the distribution of students in the Institutes of Technology according to the last school grade completed. At both institutes approximately 90 per cent of the students had completed grade twelve. Table VII shows that at the Southern Alberta Institute of Technology 941 or 89.7 per cent of the respondents had completed grade twelve while seventy-three (7.0%) had completed grade eleven. At the Northern Alberta Institute of Technology 1,342 or 91.3 per cent of the students that were surveyed had completed grade twelve whereas 84 (5.7%) had completed grade eleven.

At both institutes 1.5 per cent of the respondents had completed grade ten and 0.6 per cent had completed grade nine. Approximately 1 per cent of the respondents at each of the institutes had completed grade eight or less.

This might indicate that the Institutes of Technology are mainly involved in providing high school graduates with additional training before they enter the labour force. It appears that there are few students attending the Institutes of Technology who have not completed high school. The Institutes of Technology might be able to provide a second chance for many students who have not completed high school by providing programs suited to their particular needs and abilities.

Size of Last High School Attended

Table IX shows that 554 or 53.7 per cent of the respondents

TABLE VII

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO LAST SCHOOL GRADE COMPLETED AND INSTITUTIONAL DIVISION

Institutional Division	Last School Grade Completed					Total
	12	11	10	9	8 or Under	
Technology	680	49	5	2	6	742
Cultural	4	0	0	0	1	5
Applied Arts	191	8	0	3	4	206
Trade	35	15	11	1	2	64
Extension or Other	31	1	0	0	0	32
Total	941	73	16	6	13	1049
Percentage	89.7	7.0	1.5	0.6	1.2	100.0

TABLE VIII

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO LAST SCHOOL GRADE COMPLETED AND INSTITUTIONAL DIVISION

Institutional Division	Last School Grade Completed					
	12	11	10	9	8 or Under	Total
Technology	994	58	7	5	10	1074
Business Education and Vocational	288	15	4	2	1	310
Industrial	44	8	7	2	1	62
Other	16	3	4	0	1	24
Total	1342	84	22	9	13	1470
Percentage	91.3	5.7	1.5	0.6	0.9	100.0

TABLE IX

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO SIZE OF LAST HIGH SCHOOL ATTENDED AND INSTITUTIONAL DIVISION

Institutional Division	Size of Last High School Attended					
	1 to 99 Students	100 to 199 Students	200 to 299 Students	300 to 399 Students	400 or more Students	Total
Technology	120	76	62	84	386	728
Cultural	0	0	1	0	4	5
Applied Arts	24	23	18	20	122	207
Trade	13	6	8	10	24	61
Extension or Other	2	4	6	1	18	31
Total	159	109	95	115	554	1032
Percentage	15.4	10.6	9.2	11.1	53.7	100.0

at the Southern Alberta Institute of Technology said that they had come from a high school having 400 or more students, while 159 or 15.4 per cent of the students reported that the last high school that they had attended had from one to ninety-nine students. Table X shows that 777 or 51.7 per cent of the respondents attending the Northern Alberta Institute of Technology said that the last high school that they had attended had 400 or more students, while 210 or 14 per cent said that they had attended a high school having from one to ninety-nine students.

More than 40 per cent of the students in each of the institutes came from the city in which the institute was located. Since Calgary and Edmonton have large high schools, students coming from these cities accounted for the high percentage figure while students coming from outside these cities probably made up the major portion of the students coming from smaller high schools.

Type of High School Program Taken by Diplomates

When the data in Tables XI and XII were examined, it was apparent that the majority of the high school diplomates in the Institutes of Technology had taken the matriculation program in high school. At the Southern Alberta Institute of Technology 385 or 40 per cent of the respondents had taken a three year matriculation program while 284 or 29.5 per cent had taken a four year matriculation program. This means that 69.5 per cent of the respondents attending the Southern Alberta Institute of Technology had been enrolled in the matriculation program in high school. At the Northern Alberta Institute of Technology

TABLE X

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO SIZE OF LAST HIGH SCHOOL ATTENDED AND INSTITUTIONAL DIVISION

Institutional Division	Size of Last High School Attended					
	1 to 99 Students	100 to 199 Students	200 to 299 Students	300 to 399 Students	400 or more Students	Total
Technology	164	141	108	125	564	1102
Business Education and Vocational	30	39	27	38	180	314
Industrial	12	10	4	13	24	63
Other	4	5	5	1	9	24
Total	210	195	144	177	777	1503
Percentage	14.0	13.0	9.6	11.8	51.7	100.0

TABLE XI

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO TYPE OF HIGH SCHOOL PROGRAM TAKEN BY DIPLOMATES AND INSTITUTIONAL DIVISION

Institutional Division	Type of High School Program Taken by Diplomates					
	Matric., 3 yrs.	Matric., 4 yrs.	Business Education	Technical	Other	Total
Technology	295	212	14	103	68	692
Cultural	3	1	0	1	0	5
Applied Arts	70	57	35	14	23	199
Trade	4	7	5	8	13	37
Extension or Other	13	7	7	1	2	30
Total	385	284	61	127	106	963
Percentage	40.0	29.5	6.3	13.2	11.0	100.0

TABLE XII

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO TYPE OF HIGH SCHOOL PROGRAM TAKEN BY DIPLOMATES AND INSTITUTIONAL DIVISION

Institutional Division	Type of High School Program Taken by Diplomates					
	Matric., 3 yrs.	Matric., 4 yrs.	Business Education	Technical	Other	Total
Technology	441	294	54	131	103	1023
Business Education and Vocational	93	67	85	16	31	292
Industrial	18	12	1	12	13	56
Other	7	4	0	5	8	24
Total	559	377	140	164	155	1395
Percentage	40.1	27.0	10.0	11.8	11.1	100.0

559 or 40.1 per cent of the respondents had taken a three year matriculation program and 377 or 27.0 per cent of the high school diplomates that were surveyed said that they had taken the four year matriculation program. These two categories combined show that 67.1 per cent of the respondents at the Northern Alberta Institute of Technology had been enrolled in the matriculation program in high school. At the Southern Alberta Institute of Technology only 6.3 per cent of the high school diplomates had been enrolled in the business education program while 13.2 per cent of the diplomates that were surveyed had taken the technical program in high school. At the Northern Alberta Institute of Technology 10.0 per cent of the respondents had taken the business education program while 11.8 per cent had been enrolled in the technical program in high school.

Most of the high school diplomates attending the Institutes of Technology had been enrolled in the matriculation program in high school, while very few were enrolled in technical or business education programs that would have helped them to prepare for the courses offered at the Institutes of Technology. New procedures might be explored in an effort to make the programs of students coming from the high schools to the Institutes of Technology more complementary. It is possible that many students who eventually attend the Institutes of Technology decide to do so only after they have completed high school. Many of them probably assumed that the matriculation program would be the most beneficial program in which to enroll. This might indicate that efforts could be made to provide students with professional advice

and guidance that would enable them to make long term plans so that the types of programs that they chose to take in high school and the training that they received in the Institutes of Technology might complement one another in such a manner that what was studied in high school would be more closely related to what is studied later. Since most of the students came from large high schools which have many different programs to offer it might be assumed that most of the students chose not to enroll in the technical or business education programs that were available. The reasons why the majority of these students enrolled in the matriculation program in high school and later enrolled in an Institute of Technology would be of interest to educators who are attempting to make the high school and post-secondary educational programs of students more complementary.

High School Qualifications

At both Institutes of Technology approximately one-third of the respondents reported that they had failed to achieve matriculation standing because their examination averages were below 60 per cent. Table XIII shows that at the Southern Alberta Institute of Technology 37.2 per cent of the respondents reported that they possessed university entrance standing. Two hundred nine or 20.9 per cent of the students surveyed at the Southern Alberta Institute of Technology said that they possessed a high school diploma only. Table XIV shows that at the Northern Alberta Institute of Technology 35.4 per cent of the students possessed university entrance standing. Just under

TABLE XIII

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO HIGH SCHOOL ACADEMIC QUALIFICATIONS AND INSTITUTIONAL DIVISION

Institutional Division	High School Academic Qualifications					
	University Entrance, 6 Subjects	University Entrance, 5 Subjects	Almost Matric. Average Below 60%	High School Diploma Only	Neither H.S. Dip. nor Univ. Entrance	Total
Technology	214	85	245	123	49	716
Cultural	0	0	2	1	2	5
Applied Arts	41	21	67	56	7	192
Trade	5	2	9	19	25	60
Extension or Other	4	1	13	10	1	29
Total	264	109	336	209	84	1002
Percentage	26.3	10.9	33.5	20.9	8.4	100.0

TABLE XIV

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO HIGH SCHOOL ACADEMIC QUALIFICATIONS AND INSTITUTIONAL DIVISION

Institutional Division	High School Academic Qualifications					
	University Entrance, 6 Subjects	University Entrance, 5 Subjects	Almost Matric. Average Below 60%	High School Diploma Only	Neither H.S. Dip. nor Univ. Entrance	Total
Technology	265	143	378	213	60	1077
Business Education and Vocational	58	31	92	93	25	299
Industrial	8	4	23	10	14	59
Other	6	1	5	7	4	23
Total	337	179	498	341	103	1458
Percentage	23.1	12.3	34.2	23.4	7.1	100.0

one-quarter (23.4%) of the students reported that they had a high school diploma only.

It appears that students with low academic qualifications find it difficult to take advantage of the facilities offered by the Institutes of Technology. At present it seems that the institutes are competing with the universities for students with higher academic qualifications. This suggests that there might be value in constantly examining the role that these institutes are playing to see if they are serving the needs for which they were established. Programs designed to meet the needs of potential students who find that they are unable to attend university because of high academic entrance requirements might be developed at the Institutes of Technology. Programs of this kind would provide educational opportunities for students who cannot or who do not wish to attend university.

Summary

The data examined in Chapter III indicated that the largest portion of the students was enrolled in the Technology Division in each of the institutes. Most of the respondents lived in Alberta. There was a majority of males in both institutes. Students were concentrated most heavily in the age range from eighteen to twenty years. Most of the students that were surveyed had completed grade twelve and most of the diplomates had taken a matriculation program in high school. Over one-half of the students surveyed at each of the institutes had attended a high school having 400 or more students. A large number of

the respondents possessed university entrance standing and many more had a standing slightly below that required for university entrance because their examination average was lower than 60 per cent.

CHAPTER IV

ANALYSIS OF DATA IN TERMS OF INSTITUTION AND SEX OF THE STUDENTS

Introduction

Data obtained on the distribution of students in each of the two Institutes of Technology in terms of the sex of the students and selected characteristics of the students is shown in Tables XV to XXI. Each table shows the distribution of the students for each of the two Institutes of Technology according to sex and one of the selected characteristics which was examined. Each table is discussed in the text of the chapter. The seven characteristics being examined in terms of the sex of the students are:

1. Present place of residence (Table XV).
2. Age (Table XVI).
3. Marital status (Table XVII).
4. Estimate of total cost of the year's attendance at the institute (Table XVIII).
5. High School credits possessed by non-diplomates (Table XIX).
6. Length of institutional program (Table XX).
7. Year of program in which the student was registered (Table XXI).

Distribution by the Sex of the Students

The distribution of students according to sex is very similar in the two Institutes of Technology. Males greatly outnumber females at both institutes. Table XV shows that 918 or 87.2 per cent of the

TABLE XV

DISTRIBUTION OF STUDENTS ACCORDING TO INSTITUTE, PLACE OF PRESENT RESIDENCE, AND SEX

Institute	Sex	Place of Present Residence						
		Home	With Relatives	School Residence	Boarding	Light Housekeeping	Total	Percentage
S.A.I.T.	M	357	83	3	266	209	918	87.2
	F	61	12	0	18	44	135	12.8
	T	418	95	3	284	253	1053	
	%	39.7	9.0	0.3	27.0	24.0		100.0
N.A.I.T.	M	592	131	6	217	290	1236	78.9
	F	131	35	3	54	107	330	21.1
	T	723	166	9	271	397	1566	
	%	46.2	10.6	0.6	17.3	25.4		100.0

respondents attending the Southern Alberta Institute of Technology were male and 135 or 12.8 per cent were female. Table XV also shows the distribution of students attending the Northern Alberta Institute of Technology according to sex. Twelve hundred thirty-six or 78.9 per cent of the respondents were male and 330 or 21.1 per cent were female.

The reasons for the small percentage of females attending the Institutes of Technology need to be examined to determine whether or not there is equal opportunity for females to attend the Institutes of Technology. According to Fisher the ratio of males to females in junior colleges in the United States was about three to one.[23] At the Southern Alberta Institute of Technology the ratio of males to females was approximately nine to one, whereas the ratio of males to females at the Northern Alberta Institute of Technology was approximately four to one. The inequality in the numbers of males and females is more acute in the Institutes of Technology than in the junior colleges that Fisher studied. It is possible that steps could be taken to attract more females to the Institutes of Technology. This might be done by providing more programs that were designed to meet the needs and abilities of females who desired to continue their education.

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[23] Fisher, op. cit., p. 40.

Present Place of Residence

Table XV shows that 418 or 39.7 per cent of the students attending the Southern Alberta Institute of Technology were living at home. Two hundred eighty-four of the respondents (27.0%) reported that they were boarding with non-relatives, and 253 (24.0%) reported that they were doing light housekeeping. At the Northern Alberta Institute of Technology there were 723 students (46.2%) living at home. In addition 271 (17.3%) of the respondents reported that they were boarding with non-relatives, and 397 or 25.4 per cent reported that they were doing light housekeeping.

Approximately 40 per cent of the students at each of the institutes reported that they were living at home. The greater portion of the other students reported that they were either boarding with non-relatives or that they were doing light housekeeping. The fact that some students were able to remain at home while others were not probably explains some of the differences in the estimated cost of the year's attendance at an Institute of Technology. Students who found it necessary to leave home in order to attend an Institute of Technology incurred expenses that students who were able to live at home did not have. It is possible that some potential students were not able to attend the Institutes of Technology because they could not afford the expense of paying for living accommodations while they were attending classes. Procedures might be explored which would tend to equalize educational opportunities for students who are unable to live at home while attending classes. Possibly procedures

could be discovered that would enable many students who could not otherwise attend to take advantage of the educational opportunities offered at the Institutes.

Age of the Students

Examination of the data presented in Table XVI indicates that there were similarities in the distributions of the students in the two institutes when they were examined in terms of age. At the Southern Alberta Institute of Technology 982 (91.6%) of the respondents ranged in age from eighteen to twenty-five years. Five hundred sixty-three of the students in this age range were twenty years of age or younger while 419 were over twenty years of age. At the Northern Alberta Institute of Technology 1,415 (89.9%) of the respondents ranged in age from eighteen to twenty-five years. Eight hundred eighty-nine of the students in this age range were twenty years of age or younger while 526 reported that they were over twenty years of age.

One explanation might be that many of the students came to the Institutes of Technology shortly after they had attended high school. There might be some benefit in developing a recruitment program aimed at ensuring that people of all ages were made aware of the benefits available to them at the Institutes of Technology. There might also be value in keeping entrance requirements flexible enough to encourage students of all ages to attend the Institutes of Technology. It is possible that many potential students do not

TABLE XVI

DISTRIBUTION OF STUDENTS ACCORDING TO INSTITUTE, AGE, AND SEX

Institute	Sex	Age					
		17 or Under	18 to 20	21 to 25	26 to 30	Over 30	Total
	M	19	462	390	52	12	935
S.A.I.T.	F	1	101	29	2	4	137
	T	20	563	419	54	16	1072
	%	1.9	52.5	39.1	5.0	1.5	
	M	33	621	491	63	38	1246
N.A.I.T.	F	12	268	35	5	8	328
	T	45	889	526	68	46	1574
	%	2.9	56.5	33.4	4.3	2.9	100.0

attend day classes on a full-time basis at the Institutes of Technology because of family responsibilities. Probably many of the older students attend night classes rather than day classes if they find it necessary to work during the day-time. If low-cost housing were provided and if some form of financial assistance were available many older students might be encouraged to attend the Institutes of Technology on a full-time basis.

Marital Status of the Students

Table XVII shows that 946 (88.2%) of the respondents attending the Southern Alberta Institute of Technology were single, compared to 115 (10.7%) who reported that they were married. The same table shows that 1,360 (87.9%) of the respondents attending the Northern Alberta Institute of Technology were single whereas 171 or 11.0 per cent reported that they were married.

Just less than 90 per cent of the respondents at each of the institutes were single. Fisher reported that about 80 per cent of the full-time students attending junior colleges in the United States were single. This indicates that the percentage of married students attending the Institutes of Technology is smaller than that found in the junior colleges described by Fisher.[24] It is possible that many married persons who might make use of the facilities offered at the Institutes of Technology are unable to do so because of the financial obligations entailed in marriage. Special financial consideration

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[24] Fisher, *op. cit.*, p. 40.

TABLE XVII

DISTRIBUTION OF STUDENTS ACCORDING TO INSTITUTE, MARITAL STATUS, AND SEX

Institute	Sex	Marital Status					
		Single	Married	Widowed	Divorced	Separated	Total
S.A.I.T.	M	819	106	3	5	2	935
	F	127	9	1	0	1	138
	T	946	115	4	5	3	1073
	%	88.2	10.7	0.4	0.5	0.3	
N.A.I.T.	M	1061	153	2	4	4	1224
	F	299	18	3	4	0	324
	T	1360	171	5	8	4	1548
	%	87.9	11.0	0.3	0.5	0.3	100.0

might be given to married students to encourage them to continue their education. It is possible, however, that most married students work during the day-time and, therefore, attend night classes rather than day classes. They do not, then, show up in the present analysis which concerned only full-time day students.

The Students' Estimate of the Total Cost of the Year's Attendance at the Institute

There was wide variation in the estimated total cost of the year's attendance at each of the institutes. The most common estimate at both institutes was from $1,251 to $1,500. The second most common estimate was over $1,500. Twenty-five per cent of the students that were surveyed at the Southern Alberta Institute of Technology and 23.4 per cent of the respondents at the Northern Alberta Institute of Technology estimated that their expenses were over $1,500.

The wide variation in the estimated total cost of the year's attendance was probably caused by the fact that students were attending under a wide variety of conditions. Some of the students came long distances to attend classes while others did not; many were able to live at home while others had to pay for their accommodations; some students were single while others were married; and some students probably had more money available than others did. The many factors that had an effect on the estimated cost of the year's attendance at the institutes made this item a complex one.

TABLE XVIII

DISTRIBUTION OF STUDENTS ACCORDING TO INSTITUTE, ESTIMATED COST OF ATTENDANCE, AND SEX

Institute	Sex	Estimated Cost of Attendance					
		$750 or less	$751 to $1000	$1001 to $1250	$1251 to $1500	Over $1500	Total
S.A.I.T.	M	146	119	151	256	245	917
	F	35	25	31	26	18	135
	T	181	144	182	282	263	1052
	%	17.2	13.7	17.3	26.8	25.0	
N.A.I.T.	M.	201	180	209	308	332	1230
	F	71	79	72	67	30	319
	T	272	259	281	375	362	1549
	%	17.6	16.7	18.1	24.2	23.4	100.0

High School Credits Possessed by Non-diplomates

Examination of Table XIX shows that 163 (65.5%) of the non-diplomates attending the Southern Alberta Institute of Technology reported that they had more than ninety-five credits whereas 10.8 per cent of the respondents reported that they had fifty or fewer high school credits. Two hundred forty-nine non-diplomates attending the Southern Alberta Institute of Technology answered this question.

At the Northern Alberta Institute of Technology 265 or 65.0 per cent of the non-diplomates that were surveyed reported that they had over ninety-five credits whereas only 7.1 per cent of the respondents reported that they had fifty or fewer high school credits. At the Northern Alberta Institute of Technology 408 non-diplomates answered this question.

Although most of the students attending the two Institutes of Technology possessed high school diplomas there were some non-diplomates in attendance at each institute. More than two-thirds of the non-diplomates at each of the institutes reported that they possessed more than ninety-five credits. This would suggest that they were less than five credits away from earning a high school diploma.

Length of Institutional Program

Table XX shows that 683 or 63.7 per cent of the respondents attending the Southern Alberta Institute of Technology were enrolled

TABLE XIX

DISTRIBUTION OF STUDENTS ACCORDING TO INSTITUTE, HIGH SCHOOL CREDITS POSSESSED BY NON-DIPLOMATES, AND SEX

Institute	Sex	High School Credits Possessed by Non-diplomates					
		50 or Fewer	51 to 65	66 to 80	81 to 95	Over 95	Total
S.A.I.T.	M	25	11	19	22	148	225
	F	2	0	4	3	15	24
	T	27	11	23	25	163	249
	%	10.8	4.4	9.2	10.0	65.5	
N.A.I.T.	M	26	18	42	43	222	351
	F	3	2	6	3	43	57
	T	29	20	48	46	265	408
	%	7.1	4.9	11.8	11.3	65.0	100.0

TABLE XX

DISTRIBUTION OF STUDENTS ACCORDING TO INSTITUTE, LENGTH OF INSTITUTIONAL PROGRAM, AND SEX

Institute	Sex	Length of Institutional Program					
		Less than one year	One year	Two years	Three years	Four years or more	Total
S.A.I.T.	M	25	35	562	305	7	934
	F	3	6	121	8	0	138
	T	28	41	683	313	7	1072
	%	2.6	3.8	63.7	29.2	0.7	
N.A.I.T.	M	25	58	681	459	4	1227
	F	24	38	249	10	1	322
	T	49	96	930	469	5	1549
	%	3.2	6.2	60.0	30.3	0.3	100.0

in a two-year program and 313 or 29.2 per cent were enrolled in a three-year program. The same table shows that at the Northern Alberta Institute of Technology 930 or 60.0 per cent of the respondents were enrolled in a two-year program and 469 or 30.3 per cent were enrolled in a three-year program.

Most of the students who attend the Institutes of Technology on a full-time basis during the day-time seem to do so for a period of time that is longer than one year. The length of the institutional program in which a student is enrolled might well be considered when financial assistance for students is being studied. Students attending institutes for longer periods of time could be given additional consideration and assistance.

The Year of Program in Which Students Were Registered

Table XXI shows that 655 or 63.6 per cent of the respondents attending the Southern Alberta Institute of Technology were in the first year of their programs whereas two hundred eighty-four (27.6%) reported that they were in the second year of their programs. The same table shows that at the Northern Alberta Institute of Technology there were 829 (57.1%) respondents enrolled in the first year of their programs and 404 (27.8%) enrolled in the second year of their programs.

Most of the students surveyed were enrolled in the first year of their programs. Approximately 27 per cent of the students at each of the institutes were enrolled in the second year of their programs.

TABLE XXI

DISTRIBUTION OF STUDENTS ACCORDING TO INSTITUTE, YEAR OF PROGRAM IN WHICH NOW REGISTERED, AND SEX

Institute	Sex	Year of Program in Which Now Registered					
		First	Second	Third	Fourth	Other	Total
S.A.I.T.	M	549	259	78	4	7	897
	F	106	25	1	0	1	133
	T	655	284	79	4	8	1030
	%	63.6	27.6	7.7	0.4	0.8	
N.A.I.T.	M	583	356	180	16	16	1151
	F	246	48	6	1	1	302
	T	829	404	186	17	17	1453
	%	57.1	27.8	12.8	1.2	1.2	100.0

This may have been due to the fact that students who are enrolled in programs of one, two, or three years are all eligible to be enrolled in the first year of their programs while only those enrolled in a program of two or three years are eligible to be enrolled in the second year. The fact that enrollments have been steadily increasing during the last few years probably had an effect upon this item. As enrollments increased from year to year each first-year class tended to be larger than it was the year before. This tendency helped to make each class larger than its predecessor was.

Summary

The data examined in Chapter IV indicated that the largest portion of the students at each of the institutes was male. Many of the respondents lived at home while a number of others reported that they boarded with non-relatives or were doing light housekeeping. The ages of the students were concentrated most heavily in the age range from eighteen to twenty years. The age range from twenty-one to twenty-five years was the second highest range in terms of total frequency. Most of the respondents were single. There was a wide range in the estimated cost of the year's attendance at the institutes and no clear trend seemed to emerge. Most of the non-diplomates reported that they had more than ninety-five high school credits, and many of the students that were surveyed reported that they were enrolled in a two-year program. Just less than two-thirds of the students reported that they were in the first year of their programs.

CHAPTER V

ANALYSIS OF DATA IN TERMS OF INSTITUTION AND AGE OF THE STUDENTS

Introduction

Data obtained on the distribution of students in the two Institutes of Technology in terms of the age of the students and selected characteristics of the students are shown in Tables XXII to XXV. These tables are arranged in pairs with each pair showing the distribution of the students in the two Institutes of Technology according to the age of the students and one of the selected characteristics which was examined. The text of the chapter includes a general examination of the distribution of students according to age and describes the distribution according to each of the selected characteristics. The two student characteristics that were examined in terms of the age of the students were:

1. Employment status (Tables XXII and XXIII).
2. Last school grade completed (Tables XXIV and XXV).

Distribution According to Age

Examination of the data presented in Tables XXII and XXIII indicated that there were similarities in the distributions of the students in the two institutes when they were examined in terms of age. At the Southern Alberta Institute of Technology the ages of 969 (91.8%) of the respondents ranged from eighteen to twenty-five

TABLE XXII

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO EMPLOYMENT STATUS AND AGE

Age	Employment Status				
	Not Employed	Employed more than 30 hours per week	Employed less than 30 hours per week	Total	Percentage
17 or Under	15	2	2	19	1.8
18 to 20	428	19	107	554	52.5
21 to 25	318	13	84	415	39.3
26 to 30	40	4	8	52	4.9
Over 30	14	0	2	16	1.5
Total	815	38	203	1056	
Percentage	77.2	3.6	19.2		100.0

TABLE XXIII

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO EMPLOYMENT STATUS AND AGE

Age	Employment Status				
	Not Employed	Employed more than 30 hours per week	Employed less than 30 hours per week	Total	Percentage
17 or Under	30	5	5	40	2.6
18 to 20	702	24	146	872	56.4
21 to 25	394	19	102	515	33.3
26 to 30	51	6	13	70	4.5
Over 30	31	12	6	49	3.2
Total	1208	66	272	1546	
Percentage	78.1	4.3	17.6		100.0

years. Five hundred fifty-four of the students in this age range were twenty years of age or younger while 415 were over twenty years of age. At the Northern Alberta Institute of Technology the ages of 1,387 (89.7%) of the respondents ranged from eighteen to twenty-five years. Eight hundred seventy-two of the students in this age range were twenty years of age or younger while 515 were over twenty years of age. Many of the older students probably attended night classes rather than day classes. They did not, then, show up in the present analysis which concerned only full-time day students. The provision of financial assistance to many of these older students might encourage them to attend the Institutes of Technology on a full-time basis.

Employment Status

According to Table XXII 815 (77.2%) of the respondents attending the Southern Alberta Institute of Technology were not employed. Only 3.6 per cent of the students reported that they were employed more than thirty hours per week, whereas 19.2 per cent reported that they were employed less than thirty hours per week. Table XXIII shows that 1,208 (78.1%) of the respondents attending the Northern Alberta Institute of Technology were not employed. Sixty-six students (4.3%) reported that they were employed more than thirty hours per week and 272 (17.6%) of the respondents reported that they were employed less than thirty hours per week.

Most of the students were not employed at the time the survey was conducted. One explanation might be that these respondents

found it possible to finance their post-secondary education through summer jobs or through some other independent means. It is possible that students who found it necessary to work while they were attending the Institutes of Technology attended night classes rather than day classes. They do not, then, show up in the present analysis which concerned only full-time students. Fisher reported that about 70 per cent of the full-time junior college students held full or part-time jobs while attending junior college in the United States.[24] It is possible that students who attended the Institutes of Technology did not find it necessary to seek employment. Most of them were young and single and many of them were able to live at home while attending classes. It is also possible that the demands of the educational program at the Institutes of Technology did not allow the students time to work.

Last School Grade Completed

Tables XXIV and XXV show the distribution of students in the Institutes of Technology according to the last school grade completed. At both institutes approximately 90 per cent of the students had completed grade twelve. Table XXIV shows that at the Southern Alberta Institute of Technology 947 or 89.7 per cent of the respondents had completed grade twelve while seventy-four (7.0%) reported that they had completed grade eleven. At the Northern Alberta Institute of

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[24] Fisher, op. cit., p. 40.

TABLE XXIV

S.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO LAST SCHOOL GRADE COMPLETED AND AGE

Age	Last School Grade Completed					
	12	11	10	9	8 or Under	Total
17 or Under	15	3	1	1	0	20
18 to 20	515	29	8	1	5	558
21 to 25	371	26	4	2	4	407
26 to 30	41	9	3	1	1	55
Over 30	5	7	0	1	3	16
Total	947	74	16	6	13	1056
Percentage	89.7	7.0	1.5	0.6	1.2	100.0

TABLE XXV

N.A.I.T.: DISTRIBUTION OF STUDENTS ACCORDING TO LAST SCHOOL GRADE COMPLETED AND AGE

Age	Last School Grade Completed					
	12	11	10	9	8 or Under	Total
17 or Under	35	5	1	0	1	42
18 to 20	810	33	6	3	3	855
21 to 25	453	28	4	2	5	492
26 to 30	42	11	6	0	0	59
Over 30	25	8	5	3	4	45
Total	1365	85	22	8	13	1493
Percentage	91.4	5.7	1.5	0.5	0.9	100.0

Technology 1,365 or 91.4 per cent of the respondents reported that they had completed grade twelve whereas eighty-five (5.7%) reported that they had completed grade eleven.

It is possible that the institutes could serve many more students who have not completed grade twelve. This might be done by offering programs suited to the needs of students who cannot or who do not wish to complete high school. The institutes might be able to provide many of these students with an alternative to completing high school requirements.

Summary

Data examined in Chapter V indicated that the ages of approximately 90 per cent of the respondents at each of the institutes ranged from eighteen to twenty-five years. Just over three-quarters of the respondents reported that they were not employed at the time the survey was conducted. In both Institutes of Technology approximately 90 per cent of the students that were surveyed reported that they had completed grade twelve.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This concluding chapter presents a summary of the problem, procedure, and findings of the study. The following section consists of conclusions and implications which have emerged as a result of the information obtained from this study. Finally, recommendations for further study are made.

I. SUMMARY

The Problem

The purpose of this study was to examine selected characteristics of full-time day students attending the Institutes of Technology in Alberta. The students were examined in terms of the institution they were attending, the institutional division in which they were enrolled, sex, and age.

The Procedure

The inventory, which appears on page 90 in the Appendix, was the instrument used in the collection of the data. It was administered by officials at the institutes during March and the early part of April, 1968. A cross-tabulation computer program was used to tabulate the responses to items. The program dealt with selected characteristics in terms of institute, institutional division, sex, and age.

The Findings

Data examined in this study indicated that the largest portion of the students that were surveyed at each of the Institutes of Technology was enrolled in the Technology Division. Most of the respondents lived in Alberta and there was a majority of males at both institutes. The ages of most of the students ranged from eighteen to twenty years. Many of the respondents had completed grade twelve and most of the diplomates that were surveyed had taken a matriculation program in high school. A large number of respondents possessed university entrance standing. Many more held credit in the necessary subjects but had an average examination mark of less than the required 60 per cent. More than one half of the students that were surveyed at each of the institutes reported that they had attended a high school having 400 or more students. A large number of the respondents reported that they were living at home while others reported that they were boarding or were doing light housekeeping. Most of the respondents were single. There was a wide range in the estimated cost of the year's attendance at the institutes and no clear trend seemed to emerge. Most of the non-diplomates that were surveyed reported that they had more than ninety-five high school credits, and most of the respondents reported that they were enrolled in a two-year program. Just less than two-thirds of the students reported that they were enrolled in the first year of their programs and just more than three-quarters of the respondents reported that they were not

employed at the time the survey was conducted.

II. IMPLICATIONS

On the basis of the data presented in the study the following implications appear to be valid.

(a) There might be value in developing a specific policy which states clearly whether the two Institutes of Technology should attempt to offer similar programs or whether they should attempt to complement one another with specialized programs which differ.

(b) Some consideration could be given to the decentralization of some vocational and trade programs as recommended in the 1959 Report of the Royal Commission on Education in Alberta.[25] Services that are now offered only by the Institutes of Technology might be provided at additional points throughout the province, possibly by establishing them in Junior Colleges and in Agricultural and Vocational Colleges.

(c) Students who find it necessary to travel long distances to attend the Institutes of Technology might be given special financial assistance.

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[25] Report of the Royal Commission on Education in Alberta (Edmonton: Queen's Printer, 1959), pp. 154, 159.

(d) Consideration could be given to the provision of more programs and facilities that would meet the needs of females wishing to receive training beyond the high school level. It is possible that such programs would attract more females to the Institutes of Technology.

(e) Attempts might be made to provide programs and facilities that would attract a student population with a wider range of ages and a greater variety of educational backgrounds. This might be done by providing programs that would meet the needs of older students, and by providing them with the financial assistance necessary to enable them to attend classes on a full-time basis. Entrance requirements could be kept flexible enough to allow students with a wide variety of educational backgrounds to attend the Institutes of Technology.

(f) Consideration could be given to procedures that might make the high school and Institute of Technology programs of individual students more complementary.

(g) The possibility of providing financial assistance to students who find it necessary to leave home to attend the Institutes of Technology could be given consideration.

III. RECOMMENDATIONS FOR FURTHER STUDY

This study examined the characteristics of full-time day students who attended the Institutes of Technology in Alberta. Further research is needed in this area.

(1) There is need for a detailed study of student characteristics which would compare the students that were attending the Agricultural and Vocational Colleges, Public Junior Colleges and the Institutes of Technology.

(2) There is need for a detailed study in the area of student finances. This study might compare the expenses of students from different geographical areas, the sources of their financial support, the assistance available to them and related matters.

(3) A study in depth of a selected community and its high schools would provide valuable insights. Such a study could focus on the nature of the student population, the socio-economic conditions, the financial status of the population, and the post-secondary educational plans of the students.

(4) There is need for a longitudinal study which would show what happens to graduates of the Institutes of Technology.

(5) There is need for a detailed study of the characteristics of students who apply for admission to the Institutes of Technology and are not accepted.

(6) There is need for a study of the criteria that are used in determining entrance requirements for the Institutes of Technology in Alberta.

(7) There is need for a study of student progress to determine what happens to students who have enrolled at the Institutes of Technology. This study might examine student retention rates in order to determine how many students do not complete their programs, the reasons students do not complete their programs and related matters.

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BIBLIOGRAPHY

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APPENDIX

POST-SECONDARY EDUCATION INSTITUTION REPORT

This survey is being conducted jointly by two students in a graduate program in the Department of Educational Administration, University of Alberta, and the Office of the Board of Post-Secondary Education. Two purposes are expected to be achieved by the survey:

(a) The graduate students will analyze the data and report the analysis to meet thesis requirements;

(b) The Office of the Board of Post-Secondary Education will obtain descriptive data about the clientele currently being served by operating public post-secondary institutions.

Your assistance in completing this report showing the total number of full-time day students enrolled in each of the programs on the most recent date for which you have data in your institute or college, is appreciated. Please do not include students enrolled in apprenticeship courses.

This information is needed in order that we may compare total enrolments with student returns in the various programs.

POST-SECONDARY INSTITUTION REPORT

Date: .... Southern Alberta Institute of Technology. (Do not include students enrolled in the apprenticeship program.)

PROGRAM	ENROLMENT
1. Technology Division.	....
2. Cultural Division.	....
3. Applied Arts Division.	....
4. Trade Division.	....
5. Extension Division and other.	....

PROGRAM	ENROLMENT
(1) Advertising Art.	....
(2) Aeronautical Engineering Technology.	....
(3) Agricultural Mechanics.	....
(4) Air Conditioning and Refrigeration Technology.	....
(5) Aircraft Maintenance Technology.	....
(6) Applied Art and General Crafts.	....
(7) Architectural Technology.	....
(8) Automotive Service Technology.	....
(9) Banking Program.	....
(10) Biochemical Technology.	....
(11) Biological Sciences Technology.	....
(12) Business Administration.	....
(13) Chemical Operations Technology.	....
(14) Chemical Research Technology.	....
(15) Chemical Technology.	....
(16) Civil Technology.	....
(17) Commercial Baking.	....
(18) Commercial Cooking.	....
(19) Commercial Sign Writing Program.	....
(20) Computer Technology (or Electronic Data Processing).	....
(21) Dental Assisting Program.	....
(22) Dental Laboratory Technology.	....
(23) Diesel Mechanics (or Heavy Duty Diesel Mechanics).	....
(24) Dietary Service Technology.	....

PROGRAM	ENROLMENT
(25) Dining Room Service.	....
(26) Distributive Technology.	....
(27) Drafting Technology.	....
(28) Electrical Technology.	....
(29) Electronic Technology.	....
(30) Exploration Technology.	....
(31) Fine Arts.	....
(32) Fine Art Sculpture.	....
(33) Forest Technology.	....
(34) Gas Technology.	....
(35) Graphic Arts Administration.	....
(36) Heavy Duty Equipment Technology.	....
(37) Host-Hostess Short Course.	....
(38) Hotel, Motel and Restaurant Administration.	....
(39) Industrial Production Technology.	....
(40) Instrumentation Technology.	....
(41) Journalism Administration.	....
(42) Library Arts.	....
(43) Manufacturing Technology.	....
(44) Materials Technology.	....
(45) Mechanical Technology.	....
(46) Mechanical Design Technology.	....
(47) Medical Laboratory Technology.	....
(48) Medical X-ray Technology.	....

PROGRAM	ENROLMENT
(49) Merchandising Administration.	....
(50) Millwork and Carpentry.	....
(51) Office Machine Mechanics.	....
(52) Petroleum Technology.	....
(53) Photographic Technology.	....
(54) Planning Technology (Urban and Regional).	....
(55) Plastics Technology.	....
(56) Pottery Ceramics.	....
(57) Power Engineering Technology.	....
(58) Radio and T.V. Technician Program.	....
(59) Recreation Facility Technology.	....
(60) Respiratory Technology.	....
(61) Secretarial Arts or Technology.	....
(62) Sewing Crafts.	....
(63) Short Order and Specialty Cooking.	....
(64) Social Service Technology.	....
(65) Structural Technology.	....
(66) Surveying Technology.	....
(67) Telecommunications Technology.	....
(68) Television, Stage and Radio Arts.	....
(69) Welding Courses.	....
(70) Other programs not mentioned in any of the above categories.	....
TOTAL:	

POST-SECONDARY EDUCATION INSTITUTION REPORT

This survey is being conducted jointly by two students in a graduate program in the Department of Educational Administration, University of Alberta, and the Office of the Board of Post-Secondary Education. Two purposes are expected to be achieved by the survey:

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Your assistance in completing this report showing the total number of full-time day students enrolled in each of the programs on the most recent date for which you have data in your institute or college, is appreciated. Please do not include students enrolled in apprenticeship courses.

This information is needed in order that we may compare total enrolments with student returns in the various programs.

POST-SECONDARY INSTITUTION REPORT

Date: .... Northern Alberta Institute of Technology. (Do not include students enrolled in the apprenticeship program.)

PROGRAM	ENROLMENT
1. Technology Division.	....
2. Business Education and Vocational Division.	....
3. Industrial Division.	....
4. Other, not mentioned in 1, 2, or 3.	....

PROGRAM	ENROLMENT
(1) Advertising Art.	....
(2) Aeronautical Engineering Technology.	....
(3) Agricultural Mechanics.	....
(4) Air Conditioning and Refrigeration Technology.	....
(5) Aircraft Maintenance Technology.	....
(6) Applied Art and General Crafts.	....
(7) Architectural Technology.	....
(8) Automotive Service Technology.	....
(9) Banking Program.	....
(10) Biochemical Technology.	....
(11) Biological Sciences Technology.	....
(12) Business Administration.	....
(13) Chemical Operations Technology.	....
(14) Chemical Research Technology.	....
(15) Chemical Technology.	....
(16) Civil Technology.	....
(17) Commercial Baking.	....
(18) Commercial Cooking.	....
(19) Commercial Sign Writing Program.	....
(20) Computer Technology (or Electronic Data Processing).	....
(21) Dental Assisting Program.	....
(22) Dental Laboratory Technology.	....
(23) Diesel Mechanics (or Heavy Duty Diesel Mechanics).	....
(24) Dietary Service Technology.	....

PROGRAM	ENROLMENT
(25) Dining Room Service.	....
(26) Distributive Technology.	....
(27) Drafting Technology.	....
(28) Electrical Technology.	....
(29) Electronic Technology.	....
(30) Exploration Technology.	....
(31) Fine Arts.	....
(32) Fine Art Sculpture.	....
(33) Forest Technology.	....
(34) Gas Technology.	....
(35) Graphic Arts Administration.	....
(36) Heavy Duty Equipment Technology.	....
(37) Host-Hostess Short Course.	....
(38) Hotel, Motel and Restaurant Administration.	....
(39) Industrial Production Technology.	....
(40) Instrumentation Technology.	....
(41) Journalism Administration.	....
(42) Library Arts.	....
(43) Manufacturing Technology.	....
(44) Materials Technology.	....
(45) Mechanical Technology.	....
(46) Mechanical Design Technology.	....
(47) Medical Laboratory Technology.	....
(48) Medical X-ray Technology.	....

PROGRAM	ENROLMENT
(49) Merchandising Administration.	....
(50) Millwork and Carpentry.	....
(51) Office Machine Mechanics.	....
(52) Petroleum Technology.	....
(53) Photographic Technology.	....
(54) Planning Technology (Urban and Regional).	....
(55) Plastics Technology.	....
(56) Pottery Ceramics.	....
(57) Power Engineering Technology.	....
(58) Radio and T.V. Technician Program.	....
(59) Recreation Facility Technology.	....
(60) Respiratory Technology.	....
(61) Secretarial Arts or Technology.	....
(62) Sewing Crafts.	....
(63) Short Order and Specialty Cooking.	....
(64) Social Service Technology.	....
(65) Structural Technology.	....
(66) Surveying Technology.	....
(67) Telecommunications Technology.	....
(68) Television, Stage and Radio Arts.	....
(69) Welding Courses.	....
(70) Other programs not mentioned in any of the above categories.	....
TOTAL:	

POST-SECONDARY EDUCATION STUDENT SURVEY

This survey is being conducted jointly by two students in a graduate program in the Department of Educational Administration, University of Alberta, and by the Office of the Board of Post-Secondary Education. Two purposes are expected to be achieved by the survey:

(a) The graduate students will analyze the data and report the analysis to meet thesis requirements;

(b) The Office of the Board of Post-Secondary Education will obtain descriptive data about the clientele currently being served by operating public post-secondary institutions.

This inventory is being administered to all full-time day students attending the five public junior colleges, the three agricultural and vocational colleges and the full-time day students (other than those enrolled in the apprenticeship program) in the two institutes of technology in Alberta.

Your assistance in administering this inventory to your students is appreciated.

DIRECTIONS FOR ADMINISTRATION

1. This inventory is to be administered to all full-time day students in your classes.

2. Respondents are to use an ordinary HB pencil for marking the answer sheet.

3. There is no time limit involved in completing the inventory, but it will not normally take longer than 45 minutes.

4. Distribute the inventory to the students in your class. Answer any questions they may have about the Directions to Students or inventory items. Check to see that the students are recording their responses correctly. Collect the completed answer sheets and the inventory in separate bundles and return both to the central office of your college or institute. Please return these directions as well.

POST-SECONDARY EDUCATION STUDENT SURVEY

This survey is being conducted jointly by two students in a graduate program in the Department of Educational Administration, University of Alberta, and by the Office of the Board of Post-Secondary Education. Two purposes are expected to be achieved by the survey:

(a) the graduate students will analyze the data and report the analysis to meet thesis requirements;

(b) the Office of the Board of Post-Secondary Education will obtain descriptive data about the clientele currently being served by operating public post-secondary institutions.

This Inventory is being administered to all full-time day students attending the five public junior colleges in Alberta, the three agricultural and vocational colleges in Alberta and the full-time day students (other than those enrolled in the apprenticeship program) in the two institutes of technology in Alberta.

Data supplied will be described only for groups. No individuals will be identified. Names are not required.

Your assistance in responding to the items in the inventory is appreciated.

Directions to Students

1. All responses are to be recorded on the answer sheet. Do not write on the booklet.
2. Do not place your name at the top of the answer sheet.
3. For each question select the answer which best describes your situation and blacken the appropriate space on the answer sheet.
4. Do not give more than one answer for any one item.
5. Use an HB pencil to record your responses.
6. If you make an error and wish to change your answer, please be certain to erase your original mark completely.
7. Please return the unmarked booklet with your answer sheet to your instructor.
8. Some questions are not applicable to you. Please do not attempt to answer these questions.

....

POST-SECONDARY EDUCATION STUDENT INVENTORY

1. If you attend a junior college, which one do you attend?

    a. Grande Prairie Junior College.
    b. Red Deer Junior College.
    c. Mount Royal Junior College.
    d. Lethbridge Junior College.
    e. Medicine Hat Junior College.

2. If you attend an agricultural and vocational college or an institute of technology, which one do you attend?

    a. Fairview Agricultural and Vocational College.
    b. Vermilion Agricultural and Vocational College.
    c. Olds Agricultural and Vocational College.
    d. Northern Alberta Institute of Technology.
    e. Southern Alberta Institute of Technology.

Personal Data

3. How far from this city or town is your permanent residence?

    a. Within this city or town.
    b. 1 to 25 miles.
    c. 26 to 100 miles, but in Alberta.
    d. Over 100 miles, but in Alberta.
    e. Outside Alberta.

4. Why did you come to this institution?

    a. It was near home.
    b. The educational program was attractive.
    c. Relatives or friends were in this city or town.
    d. Entrance requirements suited your standing.
    e. Other, which cannot be classified under a, b, c, or d.

5. Where do you now reside?

    a. At home.
    b. With relatives.
    c. In a school residence.
    d. Boarding, other than with relatives.
    e. Light housekeeping (by yourself or with others).

6. What is your sex?

    a. Male.
    b. Female.

7. If you attend a junior college, what is your status according to the classification used by your college?

    a. Resident student.
    b. Non-resident student.

8. What is your age?

    a. 17 or under.
    b. 18 to 20 inclusive.
    c. 21 to 25 inclusive.
    d. 26 to 30 inclusive.
    e. Over 30.

9. What is your marital status?

    a. Single.
    b. Married.
    c. Widowed.
    d. Divorced.
    e. Separated.

10. How many children do you have?

    a. None.
    b. 1.
    c. 2.
    d. 3.
    e. 4 or more.

11. What is your employment status?

    a. Not employed.
    b. Employed more than 30 hours per week.
    c. Employed less than 30 hours per week.

12. For how long have you worked full-time since leaving high school?

    a. Less than 1 year.
    b. At least 1 full year, but less than 2.
    c. At least 2 full years, but less than 3.
    d. At least 3 full years, but less than 4.
    e. Four full years or more.

13. What is the employment status of your spouse?

    a. Not employed.
    b. Employed more than 30 hours per week.
    c. Employed less than 30 hours per week.

14. What is your estimate of the total cost of this year's attendance in this institution? (Include your personal expenses for such things as clothes, accommodation, tuition fees, books, etc.)

    a. $750 or less.
    b. $751 to $1,000.
    c. $1,001 to $1,250.
    d. $1,251 to $1,500.
    e. Over $1,500.

15. What is your estimate of your personal income during 1967, or if married, the income of you and your spouse combined?

    a. Under $2,000.
    b. $2,000 to $2,999.
    c. $3,000 to $3,999.
    d. $4,000 to $4,999.
    e. $5,000 or over.

16. What was the amount of financial assistance you received from any level of government during the 1967-68 academic term?

    a. None.
    b. Less than $100.
    c. $100 to $499.
    d. $500 to $1,000.
    e. More than $1,000.

17. Of the financial assistance you received from governments, how much must be repaid?

    a. None.
    b. Less than $100.
    c. $100 to $499.
    d. $500 to $1,000.
    e. More than $1,000.

18. What was the amount of financial assistance you received from friends and relatives during the 1967-68 academic term?

    a. None.
    b. Less than $100.
    c. $100 to $499.
    d. $500 to $1,000.
    e. More than $1,000.

19. Of the financial assistance you received from friends and relatives, how much must be repaid?

    a. None.
    b. Less than $100.
    c. $100 to $499.
    d. $500 to $1,000.
    e. More than $1,000.

20. If you are 25 or under, what is your estimate of your parents' yearly income?

    a. Under $3,000.
    b. $3,000 to $4,999.
    c. $5,000 to $6,999.
    d. $7,000 to $8,999
    e. $9,000 or more.

21. If you are 25 or under, what is your father's occupation?

    a. Business man (own business or with company).
    b. Farmer (tenant or owner).
    c. Professional.
    d. Clerical or sales personnel.
    e. Other.

22. If you are 25 or under, what is your mother's occupation?

    a. Housewife.
    b. Employed part-time.
    c. Employed full-time.
    d. Other.

23. What is the highest level of your father's education?

    a. Grade 9 or less.
    b. Some or complete high school.
    c. Business, technical, or trade training.
    d. Some university work.
    e. Not sure.

24. What is the highest level of your mother's education?

    a. Grade 9 or less.
    b. Some or complete high school.
    c. Business, technical, or trade training.
    d. Some university work.
    e. Not sure.

25. What was the last school grade you completed?

    a. 12.
    b. 11.
    c. 10.
    d. 9.
    e. 8 or under.

26. How far from this city or town was the last high school you attended?

    a. Within this city or town.
    b. 1 to 25 miles.
    c. 26 to 100 miles, but in Alberta.
    d. Over 100 miles, but in Alberta.
    e. Outside Alberta.

27. What was the combined enrolment in grades 10, 11, and 12 in the last high school you attended?

    a. 1 to 99 students.
    b. 100 to 199 students.
    c. 200 to 299 students.
    d. 300 to 399 students.
    e. 400 students or more.

28. How many years were you out of school before you entered the program you are now pursuing at this institution?

    a. None.
    b. 1 to 3.
    c. 4 to 7.
    d. 8 to 12.
    e. Over 12.

29. If you have a high school diploma, what type of program did you take in high school?

    a. Matriculation, 3 years.
    b. Matriculation, 4 years.
    c. Business Education.
    d. Technical.
    e. Other.

30. Which of the following best describes your present high school academic qualifications?

a. University entrance requirements - a 60% average or better in 6 grade twelve departmental subjects including English 30.
b. University entrance requirements - 60% average or better in 5 grade twelve departmental subjects including English 30.
c. Almost matriculation - Credit in 5 or 6 departmental examination subjects but average less than 60.
d. High school diploma only - with one or more grade twelve marks under 50.
e. Neither high school diploma nor university entrance.

31. If you possess a high school diploma, what was your average mark in all grade twelve subjects? (Include both departmental examination and non-departmental subjects).

a. H. (80% or over).
b. A. (65% to 79%).
c. B. (50% to 64%).
d. C. (40% to 49%).
e. Less than 40%.

32. In how many grade twelve subjects have you written departmental examinations?

a. None.
b. 1.
c. 2, 3, or 4.
d. 5.
e. 6 or more.

33. In how many grade twelve departmental subjects did you achieve a mark from 40% to 49% inclusive?

a. None.
b. 1.
c. 2, 3, or 4.
d. 5.
e. 6 or more.

34. In how many grade twelve departmental subjects did you achieve a mark of 50% or higher?

a. None.
b. 1.
c. 2, 3, or 4.
d. 5.
e. 6 or more.

35. If you do not have a high school diploma how many high school credits do you possess?

    a. 50 or fewer.
    b. 51 to 65.
    c. 66 to 80.
    d. 81 to 95.
    e. Over 95.

36. If you do not already hold a high school diploma, do you plan to complete the requirements for a high school diploma?

    a. No.
    b. Yes, this year.
    c. Yes, next year.
    d. Yes, after next year.
    e. Undecided.

37. If you do not already hold a high school diploma how many of the courses you are registered in at this institution will be credited toward a high school diploma?

    a. None.
    b. 1.
    c. 2.
    d. 3.
    e. 4 or more.

Post-Secondary Education

38. What is the length of the program in which you are now registered?

    a. Less than 1 year.
    b. 1 year.
    c. 2 years.
    d. 3 years.
    e. 4 years or more.

39. In what year of the program are you now registered?

    a. First.
    b. Second.
    c. Third.
    d. Fourth.
    e. Other.

40. If the program you are enrolled in uses letters to designate the year of the program, in what year of the program are you now registered?

    a. Year AB.
    b. Year A.
    c. Year B.
    d. Year C.
    e. Other, not mentioned above.

41. In what year did you first register in this institution?

    a. 1968.
    b. 1967.
    c. 1966.
    d. 1965.
    e. 1964 or earlier.

42. If you attend a junior college, in which type of program are you enrolled?

    a. High school program only.
    b. Partial high school and partial university program.
    c. University program only.
    d. Vocational program.
    e. Other.

43. If you attend an agricultural and vocational college, in which type of program are you enrolled?

    a. Diploma Course.
    b. Certificate course.
    c. Apprenticeship training program.
    d. High school program.
    e. Special program or other.

Future Plans

44. Are your future plans:

    a. To complete the present program and transfer to another educational institution?
    b. To complete the present program and then to seek employment?
    c. To seek employment before finishing the present program?
    d. Undecided?

45. If you plan to transfer to another institution after completing your present program which type of institution do you plan to attend?

    a. Agricultural and Vocational College.
    b. Institute of Technology.
    c. Junior College.
    d. University.
    e. Other.

46. If you plan to transfer to a public junior college in Alberta after completing your present program, which one do you plan to attend?

    a. Grande Prairie Junior College.
    b. Red Deer Junior College.
    c. Mount Royal Junior College.
    d. Lethbridge Junior College.
    e. Medicine Hat Junior College.

47. If you plan to attend an institute of technology after completing your present program, which one do you plan to attend?

    a. Northern Alberta Institute of Technology. (N.A.I.T.).
    b. Southern Alberta Institute of Technology. (S.A.I.T.).
    c. Other.

48. If you plan to attend an agricultural and vocational college after completing your present program, which one do you plan to attend?

    a. Fairview Agricultural and Vocational College.
    b. Vermilion Agricultural and Vocational College.
    c. Olds Agricultural and Vocational College.
    d. Other.

49. If you plan to attend a university after completing your present program, which one do you plan to attend?

    a. University of Alberta (Edmonton).
    b. University of Calgary.
    c. University of Lethbridge.
    d. Other, in Canada.
    e. Other, outside Canada.

50. If you attend N.A.I.T. which division are you enrolled in?

   a. Technology Division.
   b. Business Education and Vocational Division.
   c. Industrial Division.
   d. Other, not mentioned in a, b, or c.

51. If you attend S.A.I.T. which division are you enrolled in?

   a. Technology Division.
   b. Cultural Division.
   c. Applied Arts Division.
   d. Trade Division.
   e. Extension Division or other not mentioned in a, b, c, or d.

If you attend N.A.I.T. or S.A.I.T. then for items from 52 to 66 mark the one space on the answer sheet which names the program in which you are enrolled.

52. a. Advertising Art.
   b. Aeronautical Engineering Technology.
   c. Agricultural Mechanics.
   d. Air Conditioning and Refrigeration Technology.
   e. Aircraft Maintenance Technology.

53. a. Applied Art and General Crafts.
   b. Architectural Technology.
   c. Automotive Service Technology.
   d. Banking Program.
   e. Biochemical Technology.

54. a. Biological Sciences Technology.
   b. Business Administration.
   c. Chemical Operations Technology.
   d. Chemical Research Technology.
   e. Chemical Technology.

55. a. Civil Technology.
   b. Commercial Baking.
   c. Commercial Cooking.
   d. Commercial Sign Writing Program.
   e. Computer Technology (or Electronic Data Processing).

56. a. Dental Assisting Program.
   b. Dental Laboratory Technology.
   c. Diesel Mechanics (or Heavy Duty Diesel Mechanics).
   d. Dietary Service Technology.
   e. Dining Room Service.

57. a. Distributive Technology.
    b. Drafting Technology.
    c. Electrical Technology.
    d. Electronic Technology.
    e. Exploration Technology.

58. a. Fine Art.
    b. Fine Art Sculpture.
    c. Forest Technology.
    d. Gas Technology.
    e. Graphic Arts Administration.

59. a. Heavy Duty Equipment Technology.
    b. Host-Hostess Short Course.
    c. Hotel, Motel and Restaurant Administration.
    d. Industrial Production Technology.
    e. Instrumentation Technology.

60. a. Journalism Administration.
    b. Library Arts.
    c. Manufacturing Technology.
    d. Materials Technology.
    e. Mechanical Technology.

61. a. Mechanical Design Technology.
    b. Medical Laboratory Technology.
    c. Medical X-ray Technology.
    d. Merchandising Administration.
    e. Millwork and Carpentry.

62. a. Office Machine Mechanics.
    b. Petroleum Technology.
    c. Photographic Technology.
    d. Planning Technology (Urban and Regional).
    e. Plastics Technology.

63. a. Pottery and Ceramics.
    b. Power Engineering Technology.
    c. Radio and T.V. Technician Program.
    d. Recreation Facility Technology.
    e. Respiratory Technology.

64. a. Secretarial Arts or Technology.
    b. Sewing Crafts.
    c. Short Order and Specialty Cooking.
    d. Social Service Technology.
    e. Structural Technology.

65. a. Surveying Technology.
    b. Telecommunications Technology.
    c. Television, Stage and Radio Arts.
    d. Welding Courses.

66. a. Other program not mentioned in items 51 to 65.

ME ______ Last ______ First ______ Middle ______ SCHOOL ______

______ Years ______ GRADE ______ BOY GIRL (Circle One) DATE ______ Day Month Year NAME OF TEST ______

CAUTION—AVOID PLACING ANY MARKS AMONG THE BLACK TIMING LINES

A 1	B 2	C 3	D 4	E 5	51	A 1	B 2	C 3	D 4	E 5	101	A 1	B 2	C 3	D 4	E 5	151	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	52	A 1	B 2	C 3	D 4	E 5	102	A 1	B 2	C 3	D 4	E 5	152	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	53	A 1	B 2	C 3	D 4	E 5	103	A 1	B 2	C 3	D 4	E 5	153	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	54	A 1	B 2	C 3	D 4	E 5	104	A 1	B 2	C 3	D 4	E 5	154	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	55	A 1	B 2	C 3	D 4	E 5	105	A 1	B 2	C 3	D 4	E 5	155	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	56	A 1	B 2	C 3	D 4	E 5	106	A 1	B 2	C 3	D 4	E 5	156	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	57	A 1	B 2	C 3	D 4	E 5	107	A 1	B 2	C 3	D 4	E 5	157	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	58	A 1	B 2	C 3	D 4	E 5	108	A 1	B 2	C 3	D 4	E 5	158	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	59	A 1	B 2	C 3	D 4	E 5	109	A 1	B 2	C 3	D 4	E 5	159	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	60	A 1	B 2	C 3	D 4	E 5	110	A 1	B 2	C 3	D 4	E 5	160	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	61	A 1	B 2	C 3	D 4	E 5	111	A 1	B 2	C 3	D 4	E 5	161	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	62	A 1	B 2	C 3	D 4	E 5	112	A 1	B 2	C 3	D 4	E 5	162	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	63	A 1	B 2	C 3	D 4	E 5	113	A 1	B 2	C 3	D 4	E 5	163	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	64	A 1	B 2	C 3	D 4	E 5	114	A 1	B 2	C 3	D 4	E 5	164	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	65	A 1	B 2	C 3	D 4	E 5	115	A 1	B 2	C 3	D 4	E 5	165	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	66	A 1	B 2	C 3	D 4	E 5	116	A 1	B 2	C 3	D 4	E 5	166	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	67	A 1	B 2	C 3	D 4	E 5	117	A 1	B 2	C 3	D 4	E 5	167	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	68	A 1	B 2	C 3	D 4	E 5	118	A 1	B 2	C 3	D 4	E 5	168	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	69	A 1	B 2	C 3	D 4	E 5	119	A 1	B 2	C 3	D 4	E 5	169	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	70	A 1	B 2	C 3	D 4	E 5	120	A 1	B 2	C 3	D 4	E 5	170	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	71	A 1	B 2	C 3	D 4	E 5	121	A 1	B 2	C 3	D 4	E 5	171	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	72	A 1	B 2	C 3	D 4	E 5	122	A 1	B 2	C 3	D 4	E 5	172	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	73	A 1	B 2	C 3	D 4	E 5	123	A 1	B 2	C 3	D 4	E 5	173	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	74	A 1	B 2	C 3	D 4	E 5	124	A 1	B 2	C 3	D 4	E 5	174	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	75	A 1	B 2	C 3	D 4	E 5	125	A 1	B 2	C 3	D 4	E 5	175	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	76	A 1	B 2	C 3	D 4	E 5	126	A 1	B 2	C 3	D 4	E 5	176	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	77	A 1	B 2	C 3	D 4	E 5	127	A 1	B 2	C 3	D 4	E 5	177	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	78	A 1	B 2	C 3	D 4	E 5	128	A 1	B 2	C 3	D 4	E 5	178	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	79	A 1	B 2	C 3	D 4	E 5	129	A 1	B 2	C 3	D 4	E 5	179	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	80	A 1	B 2	C 3	D 4	E 5	130	A 1	B 2	C 3	D 4	E 5	180	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	81	A 1	B 2	C 3	D 4	E 5	131	A 1	B 2	C 3	D 4	E 5	181	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	82	A 1	B 2	C 3	D 4	E 5	132	A 1	B 2	C 3	D 4	E 5	182	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	83	A 1	B 2	C 3	D 4	E 5	133	A 1	B 2	C 3	D 4	E 5	183	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	84	A 1	B 2	C 3	D 4	E 5	134	A 1	B 2	C 3	D 4	E 5	184	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	85	A 1	B 2	C 3	D 4	E 5	135	A 1	B 2	C 3	D 4	E 5	185	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	86	A 1	B 2	C 3	D 4	E 5	136	A 1	B 2	C 3	D 4	E 5	186	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	87	A 1	B 2	C 3	D 4	E 5	137	A 1	B 2	C 3	D 4	E 5	187	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	88	A 1	B 2	C 3	D 4	E 5	138	A 1	B 2	C 3	D 4	E 5	188	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	89	A 1	B 2	C 3	D 4	E 5	139	A 1	B 2	C 3	D 4	E 5	189	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	90	A 1	B 2	C 3	D 4	E 5	140	A 1	B 2	C 3	D 4	E 5	190	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	91	A 1	B 2	C 3	D 4	E 5	141	A 1	B 2	C 3	D 4	E 5	191	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	92	A 1	B 2	C 3	D 4	E 5	142	A 1	B 2	C 3	D 4	E 5	192	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	93	A 1	B 2	C 3	D 4	E 5	143	A 1	B 2	C 3	D 4	E 5	193	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	94	A 1	B 2	C 3	D 4	E 5	144	A 1	B 2	C 3	D 4	E 5	194	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	95	A 1	B 2	C 3	D 4	E 5	145	A 1	B 2	C 3	D 4	E 5	195	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	96	A 1	B 2	C 3	D 4	E 5	146	A 1	B 2	C 3	D 4	E 5	196	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	97	A 1	B 2	C 3	D 4	E 5	147	A 1	B 2	C 3	D 4	E 5	197	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	98	A 1	B 2	C 3	D 4	E 5	148	A 1	B 2	C 3	D 4	E 5	198	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	99	A 1	B 2	C 3	D 4	E 5	149	A 1	B 2	C 3	D 4	E 5	199	A 1	B 2	C 3	D 4	E 5
A 1	B 2	C 3	D 4	E 5	100	A 1	B 2	C 3	D 4	E 5	150	A 1	B 2	C 3	D 4	E 5	200	A 1	B 2	C 3	D 4	E 5

EPARTMENT OF EDUCATION

GENERAL PURPOSE ANSWER SHEET III